

## **IN THE CLAIMS**

Claim 1 has been amended as follows:

1. (Currently Amended) A diagnostic device comprising:  
an arrangement for generating raw data representing contents of a volume;  
a computer connected to said arrangement for calculating gray-scale values,  
representing a three-dimensional image of said volume contents, from  
said raw data;  
an image system connected to said computer for generating image signals,  
according to an algorithm employing ~~[[a]]~~ an algorithmic trapezoidal  
transfer function which assigns at least one optical property to the  
respective gray-scale values, from said gray-scale values;  
a monitor connected to said image system and supplied with said image signals  
for displaying said three-dimensional image;  
a user-operable input unit connected to said image system; and  
said image system generating a histogram distribution of said gray-scale values  
and displaying user interface graphics on said monitor including a  
histogram window in which said histogram distribution is displayed, said  
image system in said graphics also displaying ~~[[a]]~~ an unchanging  
symbolic trapezoidal transfer function with a plurality of input fields  
respectively associated with different points of said symbolic trapezoidal  
transfer function, said input unit allowing entries into said input fields to  
~~select~~ set the algorithmic trapezoidal transfer function employed in said  
algorithm, and said image system inserting a representation of the

~~selected~~ set algorithmic trapezoidal transfer function in said histogram window.

Claim 2 has been amended as follows:

2. (Currently Amended) A diagnostic device as claimed in claim 1 wherein said image system displays a selection bar in said graphics and wherein said input unit allows one of a plurality of algorithmic transfer functions identified by said selection bar to be selected for representation in said graphics.

Claim 3 has been amended as follows:

3. (Currently Amended) A diagnostic device as claimed in claim 2 wherein said image system represents all of said plurality of algorithmic trapezoidal transfer functions, which are selectable via said selection bar, in said histogram window, and wherein said image system marks the algorithmic trapezoidal transfer function in said histogram window that is selected via said selection bar.

Claim 4 has been amended as follows:

4. (Currently Amended) A diagnostic device as claimed in claim 3 wherein said image system marks the ~~selected~~ set algorithmic trapezoidal transfer function at said points of said symbolic trapezoidal transfer function.

5. (Original) A diagnostic device as claimed in claim 1 wherein said symbolic trapezoidal transfer function has corner points, and wherein said input fields are respectively associated with said corner points and wherein said input unit allows, by respective entries in said input fields, selection of said corner points and thus selection of their respective gray-scale range.

6. (Original) A diagnostic device as claimed in claim 1 wherein said at least one optical property is selected from the group consisting of brightness, color and

transparency, and wherein said image system displays an input field in said graphics allowing said at least one optical property to be varied via said input unit.

7. (Original) A diagnostic device as claimed in claim 1 wherein said histogram distribution displayed in said histogram window has a gray-scale value range, and wherein said image system displays a scroll bar in said graphics allowing, via said input unit, variation of said gray-scale range.

8. (Original) A diagnostic device as claimed in claim 1 wherein said image system generates said image signals according to a volume rendering algorithm.

Claim 9 has been amended as follows:

9. (Currently Amended) A diagnostic device as claimed in claim 1 wherein said image system comprises a memory in which a plurality of different algorithmic trapezoidal transfer functions are stored, and wherein said image system displays an input field in said graphics allowing selection, via said input unit, of one of the algorithmic trapezoidal transfer functions stored in said memory for use as said algorithmic trapezoidal transfer function employed in said algorithm.